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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/685,772	10/11/2000	Carola Blaesing-Bangert	2098L/49301	5050

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CROWELL & MORING LLP  
INTELLECTUAL PROPERTY GROUP  
P.O. BOX 14300  
WASHINGTON, DC 20044-4300

EXAMINER
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NGUYEN, MICHELLE P

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicant(s)

09/685,772

Applicant(s)

BLAESING-BANGERT ET AL.

Examiner

Michelle Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 23-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 1-22, drawn to a substrate holder and the use of a substrate holder, in Paper No. 10 is acknowledged.

The traversal is on the ground(s) that applicant's substrate holder 8 is a necessary component in order to determine the thickness deviation of a substrate. However, Group II, claims 23-28, drawn to a method of determining the thickness deviation of a substrate from a predefined standard thickness, does not require only the substrate holder of Group I to be used in the determination of the thickness deviation of a substrate. Further, Group I does not require the substrate holder thereof to be used for only the determination of the thickness deviation of a substrate. Therefore, the requirement is still deemed proper and is therefore made FINAL.

As to new claim 29, the limitations recited therein are not directed to a substrate holder. Instead, the limitations of claim 29 are drawn to a method for determining the thickness deviation of a substrate from a predefined standard thickness. Consequently, claim 29 belongs to Group II, and is therefore withdrawn from consideration. Further, limitations b) and c) of claim 29 are not present in Group I.

### ***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on October 11, 1999. It is noted, however, that applicant has not filed a certified copy of the 199 48 797.9 application as required by 35 U.S.C. 119(b).

***Specification***

3. The disclosure is objected to because:
- (a) On page 1, lines 16-29 should be double-spaced.
  - (b) On page 5, line 21, reference sign "4" has been used to designate an X/Y carriage. However, on page 4, lines 23-4, reference sign "4" has been used to designate a mirror body. Applicant may wish to delete "4" on page 5, line 21.
  - (c) On page 7, line 4, "substrate 8" should be --substrate 20--.
  - (d) On page 8, line 8, "substrate" should be --substrate holder--.
- Appropriate correction is required.

***Claim Objections***

4. Claims 1, 6, 10, 12, 13, 17, 21 and 22 are objected to because:
- (a) In claim 1, line 1, "comprises" should be --comprising:--.
  - (b) In claim 6, line 2, "substrate holder (20)" should be --substrate holder (8)--.
  - (c) Claim 10 recites the limitation "the mirror body" in line 2. There is insufficient antecedent basis for this limitation in the claim.
  - (d) Claim 10 recites the limitation "the X/Y carriage" in line 2. There is insufficient antecedent basis for this limitation in the claim.
  - (e) Claim 12 recites the limitation "the substrate holder" in line 1. There is insufficient antecedent basis for this limitation in the claim.
  - (f) Claim 13 fails to further limit the subject matter of previous claim 1, and is therefore of improper dependent form. See 37 CFR 1.75(c). Specifically, claim 13 recites limitations already set forth in claim 1 from which claim 13 depends

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indirectly. Applicant is required to cancel the claim(s), amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

(g) In claim 17, line 2, "substrate holder (20)" should be --substrate holder (8)--.

(h) Claim 21 fails to further limit the subject matter of previous claim 10, and is therefore of improper dependent form. See 37 CFR 1.75(c). Specifically, claim 21 recites limitations already set forth in claim 10 from which claim 21 depends indirectly. Applicant is required to cancel the claim(s), amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

(i) Claim 21 recites the limitation "the mirror body" in line 2. There is insufficient antecedent basis for this limitation in the claim.

(j) Claim 21 recites the limitation "the X/Y carriage" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

(k) Claim 22 fails to further limit the subject matter of previous claim 11, and is therefore of improper dependent form. See 37 CFR 1.75(c). Specifically, claim 22 recites limitations already set forth in claim 11 from which claim 22 depends indirectly. Applicant is required to cancel the claim(s), amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the spacing from the upper surface of the spheres to the flat upper surface (42) of the substrate holder (8) corresponds substantially to the standard thickness of the substrate type being used" in lines 7-10. Neither the claim language nor applicant's disclosure makes clear the meaning of the phrase "corresponds substantially to the standard thickness of the substrate", which renders the claim vague and indefinite.

Claims 2-11 include all limitations set forth in claim 1.

Claim 3 recites the limitation "the sphere provided on the support element (34) is a spherical jewel" in lines 1-2. The claim language does not make clear to which sphere and support element of the three spheres and three support elements this limitation refers, thereby rendering the claim vague and indefinite.

Claim 4 includes all limitations set forth in claim 3.

Claim 10 recites the limitation "wherein the substrate holder (8) can be inserted into the mirror body (4) of the X/Y carriage" in lines 1-2. The phrase "can be" does not make clear whether the structure of the mirror body in which the substrate holder is inserted is intended to further limit applicant's invention (i.e. whether the mirror body is a

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part of the invention applicant is claiming), thereby rendering the claim vague and indefinite.

Further, claim 10 recites the limitation "multiple spacer pins (26) having a spherical protrusion" in line 4. The claim language does not make clear whether the spacer pins collectively have a single spherical protrusion, or whether each of the spacer pins has a spherical protrusion, thereby rendering the claim vague and indefinite.

Claim 11 includes all limitations set forth in claim 10.

Claim 12 provides for the use of the substrate holder, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Further, claim 12 recites the limitation "a highly accurate measuring instrument" in line 1. The claim language does not set forth a clear definition of the phrase "highly accurate", thereby rendering the claim vague and indefinite. Claim 12 further recites the limitation "the substrate holder (8) is suitable for determining the deviation from the standard thickness for substrates of one type" in lines 2-3. The term "suitable" does not make clear whether determining the deviation is intended to further limit the structure of the substrate holder (i.e. whether determining the deviation is a part of the invention applicant is claiming), thereby rendering the claim vague and indefinite.

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Claims 13-22 are rejected for reasons discussed above in connection with claims 1 -11.

***Claim Rejections - 35 USC § 101***

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claim 12 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-6 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,609,285 to Samuels.

With regard to claim 1, Samuels discloses a substrate holder (plate assembly 10) of a substrate (wafer 20) comprising:

a) a one-piece frame (plate 13) having a flat upper surface (surface 11)

(see Fig. 2);



b) an opening (aperture 28) having a peripheral rim (not numbered) that is configured in the substrate holder (see Fig. 2); and

c) three support elements (tabs 23) that are shaped on the peripheral rim of the opening, on which are mounted spheres (balls 22) on which the substrate rests (see Col. 2, lines 38-45, Figs. 1, 2); and

the spacing from the upper surface of the spheres to the flat upper surface of the substrate holder corresponds substantially to the standard thickness of the substrate type being used (see Fig. 1).

With regard to claim 2, Samuels teaches the substrate holder as defined in Claim 1, wherein the size of the opening in the substrate holder corresponds in each case substantially to the size of the substrate type being used (see Fig. 1).

With regard to claim 3, Samuels teaches the substrate holder as defined in Claim 1, wherein the sphere provided on the support element is a spherical jewel that constitutes a point-like support for the substrate (see Col. 5, lines 38-44, Fig. 1).

With regard to claim 4, Samuels teaches the substrate holder as defined in Claim 3, wherein the point-like supports are arranged on the peripheral rim of the opening in such a way that the point-like supports form the vertices of an equilateral triangle (see Fig. 2).

With regard to claim 5, Samuels teaches the substrate holder as defined in Claim 1, wherein reflective elements (alignment pins 24) are mounted on the peripheral rim of the substrate holder in such a way that they extend into the opening of the substrate holder (see Fig. 2).

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With regard to claim 6, Samuels teaches the substrate holder as defined in Claim 1, wherein the outside dimensions of the substrate holder are the same for all substrate types; and the opening is configured with respect to the size of the substrate type being used (see Figs. 1, 2).

With regard to claim 12, Samuels discloses a substrate holder (plate assembly 10) which may be used in a highly accurate measuring instrument, wherein the substrate holder is suitable for determining the deviation from the standard thickness for substrates of one type (see Figs. 1, 2).

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,609,285 to Samuels as applied to claim 1 above, and further in view of U.S. Patent No. 4,549,843 to Jagusch et al.

With regard to claim 7, Samuels does not teach the substrate holder as defined in Claim 1, wherein a code is provided on the flat upper surface of the substrate holder. However, Jagusch et al. teach a code (bar code 231) to be provided on a flat upper surface (surface of cassette cover 211) of a substrate holder (cassette 200) (see Figs. 3, 5). It would have been obvious to one having ordinary skill in the art at the time the

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invention was made to add to the substrate holder of Samuels the code of Jagusch et al. for providing a means for identifying the substrate holder.

With regard to claim 8, Jagusch et al. teach the code discussed above with respect to claim 7 to be a dot code, a dot matrix, a bar code (bar code 231), or a readable legend (see Fig. 5).

With regard to claim 9, Samuels does not teach the substrate holder as defined in Claim 1, wherein at least one reference mark is provided on the flat upper surface of the substrate holder. However, Jagusch et al. teach a reference mark (bar code 231) to be provided on a flat upper surface (surface of cassette cover 211) of a substrate holder (cassette 200) (see Figs. 3, 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add to the substrate holder of Samuels the reference mark of Jagusch et al. for providing a means for identifying the substrate holder.

13. Claims 10, 11 and 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,609,285 to Samuels as applied to claim 1 above, and further in view of U.S. Patent 4,583,847 to Battig et al.

With regard to claim 10, Samuels does not teach explicitly the substrate holder as defined in Claim 1, wherein the substrate holder can be inserted into a mirror body of an X/Y carriage. However, Battig et al. teach a mirror body (prismatic block 1 having silvered elongated areas 5, 6) of an X/Y carriage (cross-table having platforms 17, 18) having inserted therein a substrate (wafer 3), there being defined in the mirror body an opening around which is provided a rim on which multiple spacer pins (studs 2) having a

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spherical protrusion are mounted, so that the substrate rests on the spherical protrusions (see Fig. 1). Battig et al. teach the mirror body of the X/Y carriage to aid in the adjustment of the wafer in a projection plane of a projection lens (see Col. 2, lines 29-32). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide for the substrate holder of Samuels the mirror body of the X/Y carriage of Battig et al. into which the substrate holder can be inserted for facilitating adjustments of the substrate.

With regard to claims 11, 13, 21 and 22, Battig et al. teach the spacer pins discussed above with respect to claim 10 to be distributed on the peripheral rim of the mirror body in such a way that they are provided at the vertices of an equilateral triangle (see Fig. 1).

With regard to claims 14-20, see discussions above with respect to claims 2-4 and 6-9.

### ***Conclusion***

14. The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent No. 5,959,731 to Jones

U.S. Patent No. 5,894,056 to Kakizaki et al.

U.S. Patent No. 5,608,773 to Korenaga et al.

U.S. Patent No. 5,786,897 to Ototake

U.S. Patent No. 4,655,594 to Wittekoek et al.

U.S. Patent No. 4,924,258 to Tsutsui


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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Nguyen whose telephone number is 703-305-2771. The examiner can normally be reached on M-F 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.

mpn  
July 31, 2003

  
RUSSELL ADAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800